SEQUENCE LISTING

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<120> PHOSPHATASE REGULATION OF NUCLEIC ACID TRANSCRIPTION

<130> 00015-041US1

<140> US/10/552,298
<141> 2005-09-30

<150> US 60/459,786
<151> 2003-04-01

<160> 69

<170> PatentIn version 3.5

<210> 1
<211> 783
<212> DNA
<213> Homo sapiens

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tag 783

<210> 2
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<212> PRT
<213> Homo sapiens

<400> 2

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Gly Pro Leu Arg Gly Lys Gly Asp Gln Lys Ser Ala Ala Ser Gln Lys
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Pro Arg Ser Arg Gly Ile Leu His Ser Leu Phe Cys Cys Val Cys Arg
35 40 45

Asp Asp Gly Glu Ala Leu Pro Ala His Ser Gly Ala Pro Leu Leu Val
50 55 60

Glu Glu Asn Gly Ala Ile Pro Lys Thr Pro Val Gln Tyr Leu Leu Pro
65 70 75 80

Glu Ala Lys Ala Gln Asp Ser Asp Lys Ile Cys Val Val Ile Asp Leu
85 90 95

Asp Glu Thr Leu Val His Ser Ser Phe Lys Pro Val Asn Asn Ala Asp
100 105 110

Phe Ile Ile Pro Val Glu Ile Asp Gly Val Val His Gln Val Tyr Val
115 120 125

Leu Lys Arg Pro His Val Asp Glu Phe Leu Gln Arg Met Gly Glu Leu
130 135 140

Phe Glu Cys Val Leu Phe Thr Ala Ser Leu Ala Lys Tyr Ala Asp Pro
145 150 155 160

Val Ala Asp Leu Leu Asp Lys Trp Gly Ala Phe Arg Ala Arg Leu Phe
165 170 175

Arg Glu Ser Cys Val Phe His Arg Gly Asn Tyr Val Lys Asp Leu Ser
180 185 190

Arg Leu Gly Arg Asp Leu Arg Arg Val Leu Ile Leu Asp Asn Ser Pro
195 200 205

Ala Ser Tyr Val Phe His Pro Asp Asn Ala Val Pro Val Ala Ser Trp
210 215 220

Phe Asp Asn Met Ser Asp Thr Glu Leu His Asp Leu Leu Pro Phe Phe
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Arg Pro Gly Ser
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<213>  Homo sapiens

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cttttctgct gttttcgcgc ccagcatgtt ggccagtcaa gttcctccac tgagctcgct      180

gcgtataagg aggaagcaaa caccattgct aagtcggatc tgctccagtg tctccagtac      240

cagttctacc agatcccagg gacctgcctg ctcccagagg tgacagagga agatcaagga      300

aggatctgtg tggtcattga cctcgatgaa acccttgtgc atagctcctt taagccaatc      360

aacaatgctg acttcatagt gcctatagag attgagggga ccactcacca ggtgtatgtg      420

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aaggacctca gccgcctggg gagggacctg agaaagaccc tcatcctgga caactcgcct      660

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<210>  4
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<212>  PRT
<213>  Homo sapiens

<400>  4

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Val Leu Thr Lys Gln Gly Leu Val Ser Lys Ser Ser Pro Lys Lys Pro
            20                  25                  30
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Arg Gly Arg Asn Ile Phe Lys Ala Leu Phe Cys Cys Phe Arg Ala Gln
        35                  40                  45

His Val Gly Gln Ser Ser Ser Ser Thr Glu Leu Ala Ala Tyr Lys Glu
    50                  55                  60

Glu Ala Asn Thr Ile Ala Lys Ser Asp Leu Leu Gln Cys Leu Gln Tyr
65                  70                  75                  80

Gln Phe Tyr Gln Ile Pro Gly Thr Cys Leu Leu Pro Glu Val Thr Glu
                85                  90                  95

Glu Asp Gln Gly Arg Ile Cys Val Val Ile Asp Leu Asp Glu Thr Leu
            100                 105                 110

Val His Ser Ser Phe Lys Pro Ile Asn Asn Ala Asp Phe Ile Val Pro
        115                 120                 125

Ile Glu Ile Glu Gly Thr Thr His Gln Val Tyr Val Leu Lys Arg Pro
    130                 135                 140

Tyr Val Asp Glu Phe Leu Arg Arg Met Gly Glu Leu Phe Glu Cys Val
145                 150                 155                 160

Leu Phe Thr Ala Ser Leu Ala Lys Tyr Ala Asp Pro Val Thr Asp Leu
                165                 170                 175

Leu Asp Arg Cys Gly Val Phe Arg Ala Arg Leu Phe Arg Glu Ser Cys
            180                 185                 190

Val Phe His Gln Gly Cys Tyr Val Lys Asp Leu Ser Arg Leu Gly Arg
        195                 200                 205

Asp Leu Arg Lys Thr Leu Ile Leu Asp Asn Ser Pro Ala Ser Tyr Ile
    210                 215                 220

Phe His Pro Glu Asn Ala Val Pro Val Gln Ser Trp Phe Asp Asp Met
225                 230                 235                 240

Ala Asp Thr Glu Leu Leu Asn Leu Ile Pro Ile Phe Glu Glu Leu Ser
                245                 250                 255

Gly Ala Glu Asp Val Tyr Thr Ser Leu Gly Ala Ala Ala Gly Pro Leu
            260                 265                 270
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Ala Cys Pro Ala Ser Lys Arg Arg Pro Ser Gln
        275                 280
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<211> 798
<212> DNA
<213> Homo sapiens

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agcatcctta gctccttctt ctgctgcttc cgtgattaca atgtggaggc ccctccaccc 180

agcagcccca gtgtgcttcc gccactggtg gaggagaatg gtgggcttca gaagccacca 240

gctaagtacc ttcttccaga ggtgacggtg cttgactatg gaaagaaatg tgtggtcatt 300

gatttagatg aaacattggt gcacagttcg tttaagccta ttagtaatgc tgattttatt 360

gttccggttg aaatcgatgg aactatacat caggtgtatg tgctgaagcg gccacatgtg 420

gacgagttcc tccagaggat ggggcagctt tttgaatgtg tgctctttac tgccagcttg 480

gccaagtatg cagaccctgt ggctgacctc ctagaccgct ggggtgtgtt ccgggcccgg 540

ctcttcagag aatcatgtgt ttttcatcgt gggaactacg tgaaggacct gagtcgcctt 600

gggcgggagc tgagcaaagt gatcattgtt gacaattccc ctgcctcata catcttccat 660

cctgagaatg cagtgcctgt gcagtcctgg ttcgatgaca tgacggacac ggagctgctg 720

gacctcatcc ccttctttga gggcctgagc cgggaggacg acgtgtacag catgctgcac 780

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<210> 6
<211> 265
<212> PRT
<213> Homo sapiens

<400> 6

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Met Asp Gly Pro Ala Ile Ile Thr Gln Val Thr Asn Pro Lys Glu Asp
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Glu Gly Arg Leu Pro Gly Ala Gly Glu Lys Ala Ser Gln Cys Asn Val
            20                  25                  30


Ser Leu Lys Lys Gln Arg Ser Arg Ser Ile Leu Ser Ser Phe Phe Cys
        35                  40                  45


Cys Phe Arg Asp Tyr Asn Val Glu Ala Pro Pro Pro Ser Ser Pro Ser
    50                  55                  60
```

```
Val Leu Pro Pro Leu Val Glu Glu Asn Gly Gly Leu Gln Lys Pro Pro
65                  70                  75                  80

Ala Lys Tyr Leu Leu Pro Glu Val Thr Val Leu Asp Tyr Gly Lys Lys
                85                  90                  95

Cys Val Val Ile Asp Leu Asp Glu Thr Leu Val His Ser Ser Phe Lys
            100                 105                 110

Pro Ile Ser Asn Ala Asp Phe Ile Val Pro Val Glu Ile Asp Gly Thr
        115                 120                 125

Ile His Gln Val Tyr Val Leu Lys Arg Pro His Val Asp Glu Phe Leu
    130                 135                 140

Gln Arg Met Gly Gln Leu Phe Glu Cys Val Leu Phe Thr Ala Ser Leu
145                 150                 155                 160

Ala Lys Tyr Ala Asp Pro Val Ala Asp Leu Leu Asp Arg Trp Gly Val
                165                 170                 175

Phe Arg Ala Arg Leu Phe Arg Glu Ser Cys Val Phe His Arg Gly Asn
            180                 185                 190

Tyr Val Lys Asp Leu Ser Arg Leu Gly Arg Glu Leu Ser Lys Val Ile
        195                 200                 205

Ile Val Asp Asn Ser Pro Ala Ser Tyr Ile Phe His Pro Glu Asn Ala
    210                 215                 220

Val Pro Val Gln Ser Trp Phe Asp Asp Met Thr Asp Thr Glu Leu Leu
225                 230                 235                 240

Asp Leu Ile Pro Phe Phe Glu Gly Leu Ser Arg Glu Asp Asp Val Tyr
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Ser Met Leu His Arg Leu Cys Asn Arg
            260                 265
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<211> 642
<212> DNA
<213> Homo sapiens

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gacgtgtact cagtgctcag gcagccacgg ccagggagct ag 642

<210> 8
<211> 213
<212> PRT
<213> Homo sapiens

<400> 8

Met Met Gly Arg Pro Cys Leu Leu Thr Ala Gly Arg Pro Cys Leu Trp
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Arg Arg Met Ala Pro Ser Leu Arg Gln Thr Pro Val Gln Tyr Leu Leu
20 25 30

Pro Glu Ala Lys Ala Gln Asp Ser Asp Lys Ile Cys Val Val Ile Asp
35 40 45

Leu Asp Glu Thr Leu Val His Ser Ser Phe Lys Pro Val Asn Asn Ala
50 55 60

Asp Phe Ile Ile Pro Val Glu Ile Asp Gly Val Val His Gln Val Tyr
65 70 75 80

Val Leu Lys Arg Pro His Val Asp Glu Phe Leu Gln Arg Met Gly Glu
85 90 95

Leu Phe Glu Cys Val Leu Phe Thr Ala Ser Leu Ala Lys Tyr Ala Asp
100 105 110

Pro Val Ala Asp Leu Leu Asp Lys Trp Gly Ala Phe Arg Ala Arg Leu
115 120 125

Phe Arg Glu Ser Cys Val Phe His Arg Gly Asn Tyr Val Lys Asp Leu

```
    130                 135                 140

Ser Arg Leu Gly Arg Asp Leu Arg Arg Val Leu Ile Leu Asp Asn Ser
145                 150                 155                 160

Pro Ala Ser Tyr Val Phe His Pro Asp Asn Ala Val Pro Val Ala Ser
                165                 170                 175

Trp Phe Asp Asn Met Ser Asp Thr Glu Leu His Asp Leu Leu Pro Phe
            180                 185                 190

Phe Glu Gln Leu Ser Arg Val Asp Asp Val Tyr Ser Val Leu Arg Gln
        195                 200                 205

Pro Arg Pro Gly Ser
    210
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<210> 9
<211> 783
<212> DNA
<213> Drosophila

<400> 9

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cccctgcttg tggaggagaa tggcgccatc cctaagaccc cagtccaata cctgctccct      240

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gtgcacagct ccttcaagcc agtgaacaac gcggacttca tcatccctgt ggagattgat      360

ggggtggtcc accaggtcta cgtgttgaag cgtcctcatg tggatgagtt cctgcagcga      420

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gtcttccacc gggggaacta cgtgaaggac ctgagccggt tgggtcgaga cctgcggcgg      600

gtgctcatcc tggacaattc acctgcctcc tatgtcttcc atccagacaa tgctgtaccg      660

gtggcctcgt ggtttgacaa catgagtgac acagagctcc acgacctcct ccccttcttc      720

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tag                                                                    783
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<210> 10
<211> 260
<212> PRT

<213> Drosophila

<400> 10

Met Asp Ser Ser Ala Val Ile Thr Gln Ile Ser Lys Glu Glu Ala Arg
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Gly Pro Leu Arg Gly Lys Gly Asp Gln Lys Ser Ala Ala Ser Gln Lys
20 25 30

Pro Arg Ser Arg Gly Ile Leu His Ser Leu Phe Cys Cys Val Cys Arg
35 40 45

Asp Asp Gly Glu Ala Leu Pro Ala His Ser Gly Ala Pro Leu Leu Val
50 55 60

Glu Glu Asn Gly Ala Ile Pro Lys Thr Pro Val Gln Tyr Leu Leu Pro
65 70 75 80

Glu Ala Lys Ala Gln Asp Ser Asp Lys Ile Cys Val Val Ile Glu Leu
85 90 95

Asn Glu Thr Leu Val His Ser Ser Phe Lys Pro Val Asn Asn Ala Asp
100 105 110

Phe Ile Ile Pro Val Glu Ile Asp Gly Val Val His Gln Val Tyr Val
115 120 125

Leu Lys Arg Pro His Val Asp Glu Phe Leu Gln Arg Met Gly Glu Leu
130 135 140

Phe Glu Cys Val Leu Phe Thr Ala Ser Leu Ala Lys Tyr Ala Asp Pro
145 150 155 160

Val Ala Asp Leu Leu Asp Lys Trp Gly Ala Phe Arg Ala Arg Leu Phe
165 170 175

Arg Glu Ser Cys Val Phe His Arg Gly Asn Tyr Val Lys Asp Leu Ser
180 185 190

Arg Leu Gly Arg Asp Leu Arg Arg Val Leu Ile Leu Asp Asn Ser Pro
195 200 205

Ala Ser Tyr Val Phe His Pro Asp Asn Ala Val Pro Val Ala Ser Trp
210 215 220

Phe Asp Asn Met Ser Asp Thr Glu Leu His Asp Leu Leu Pro Phe Phe

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225                 230                 235                 240

Glu Gln Leu Ser Arg Val Asp Asp Val Tyr Ser Val Leu Arg Gln Pro
                245                 250                 255

Arg Pro Gly Ser
            260
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<211> 642
<212> DNA
<213> Drosophila

<400> 11
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<212> PRT
<213> Drosophila

<400> 12

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Arg Arg Met Ala Pro Ser Leu Arg Gln Thr Pro Val Gln Tyr Leu Leu
            20                  25                  30

Pro Glu Ala Lys Ala Gln Asp Ser Asp Lys Ile Cys Val Val Ile Glu
        35                  40                  45

Leu Asn Glu Thr Leu Val His Ser Ser Phe Lys Pro Val Asn Asn Ala
    50                  55                  60
```

```
Asp Phe Ile Ile Pro Val Glu Ile Asp Gly Val Val His Gln Val Tyr
65                  70                  75                  80

Val Leu Lys Arg Pro His Val Asp Glu Phe Leu Gln Arg Met Gly Glu
                85                  90                  95

Leu Phe Glu Cys Val Leu Phe Thr Ala Ser Leu Ala Lys Tyr Ala Asp
            100                 105                 110

Pro Val Ala Asp Leu Leu Asp Lys Trp Gly Ala Phe Arg Ala Arg Leu
        115                 120                 125

Phe Arg Glu Ser Cys Val Phe His Arg Gly Asn Tyr Val Lys Asp Leu
    130                 135                 140

Ser Arg Leu Gly Arg Asp Leu Arg Arg Val Leu Ile Leu Asp Asn Ser
145                 150                 155                 160

Pro Ala Ser Tyr Val Phe His Pro Asp Asn Ala Val Pro Val Ala Ser
                165                 170                 175

Trp Phe Asp Asn Met Ser Asp Thr Glu Leu His Asp Leu Leu Pro Phe
            180                 185                 190

Phe Glu Gln Leu Ser Arg Val Asp Asp Val Tyr Ser Val Leu Arg Gln
        195                 200                 205

Pro Arg Pro Gly Ser
    210
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<211> 7020
<212> DNA
<213> Drosophila

<400> 13

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ggagcgcgcc cggccccatg gacagctcgg ccgtcattac tcagatcagc aaggaggagg      420
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Asn Arg Lys Leu Val Leu Met Val Asp Leu Asp Gln Thr Leu Ile His
1 5 10 15

Thr Thr Glu Gln His Cys Gln Gln Met Ser Asn Lys Gly Ile Phe His
20 25 30

Phe Gln Leu Gly Arg Gly Glu Pro Met Leu His Thr Arg Leu Arg Pro
35 40 45

His Cys Lys Asp Phe Leu Glu Lys Ile Ala Lys Leu Tyr Glu Leu His
50 55 60

Val Phe Thr Phe Gly Ser Arg Leu Tyr Ala His Thr Ile Ala Gly Phe
65 70 75 80

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Leu Asp Pro Glu Lys Lys Leu Phe Ser His Arg Ile Leu Ser Arg Asp
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Glu Cys Ile Asp Pro Phe Ser Lys Thr Gly Asn Leu Arg Asn Leu Phe
            100                 105                 110

Pro Cys Gly Asp Ser Met Val Cys Ile Ile Asp Asp Arg Glu Asp Val
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Gln Gly Thr Gly Asp Met
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Xaa Xaa Xaa Asp Xaa Asp Xaa Xaa Xaa Xaa
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